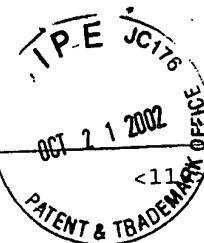


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OCT 24 2002

TECH CENTER 1600/2900



<110> Vogels, Ronald  
Schouten, Govert J.  
Bout, Abraham

<120> Means and Methods for Fibroblast-Like or Macrophage-Like Cell Transduction

<130> 2183-3982.2US

<140> 09/517,898

<141> 2000-03-03

<150> 60/122,732

<151> 1999-03-03

<160> 38

<170> PatentIn version 3.1

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47

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<223> Chemically synthesized Primer HSA-2

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<220>  
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28

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50

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<212> DNA  
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<220>  
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64

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10

<210> 17  
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<212> DNA  
<213> Artifical sequence

<220>  
<223> Chemically synthesized Primer

<400> 17  
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<220>

<223> Chemically synthesized Primer

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29

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ber protein derived from adenovirus serotype

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<220>  
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<210> 23

<211> 36  
<212> DNA  
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<220>  
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ber protein derived from adenovirus serotype

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cccgtttacc catatgaccc atttgacaca tcagac

36

<210> 24  
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<212> DNA  
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<220>  
<223> Chemically synthesized oligonucleotide for amplification of DNA encoding fi  
ber protein derived from adenovirus serotype

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<212> DNA  
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ber protein derived from adenovirus serotype

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30

<210> 26  
<211> 36  
<212> DNA  
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<220>  
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ber protein derived from adenovirus serotype

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36

<210> 27  
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<212> DNA  
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<220>  
<223> Chemically synthesized oligonucleotide for amplification of DNA encoding fi  
ber protein derived from adenovirus serotype

<400> 27  
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30

<210> 28  
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<220>  
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ber protein derived from adenovirus serotype

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30

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ber protein derived from adenovirus serotype

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02  
Cont  
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<211> 37  
<212> DNA  
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<220>  
<223> Chemically synthesized oligonucleotide for amplification of DNA encoding fi  
ber protein derived from adenovirus serotype

<400> 30  
ccgttaatta agcccttatt gttctgttac ataagaa

37

<210> 31  
<211> 30  
<212> DNA  
<213> Artifical sequence

<220>  
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ber protein derived from adenovirus serotype

<400> 31  
ccgatgcatt cagtcatcyt ctwtaatata

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<210> 32  
<211> 1068

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**<212> DNA**  
**<213> Artificial sequence**

**<220>** **<223> DNA encoding Adenovirus Ad5/fib16 chimeric fiber**

<400> 32	60
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agcagctcac aacacccctt tataaaccctt ggtttcattt cctcaaattgg ttttgaccaa	180
agcccagatg gagttctaac tcttaatgt gttaatccac tcactaccgc cagcggaccc	240
ctccaactta aagttggaag cagtcttaca gtagatacta tcgatgggtc tttggaggaa	300
aatataactg ccgaagcgcc actcactaaa ctaaccactc cataggttta ttaataggat	360
ctggcttgca aacaaaggat gataaacttt gtttatcgct gggagatggg ttggtaacaa	420
aggatgataa actatgttta tcgctggag atgggttaat aacaaaaat gatgtactat	480
gtgccaaact aggacatggc cttgtgttg actcttccaa tgctatcacc atagaaaaca	540
acacccctgtg gacaggcgca aaaccaagcg ccaactgtgt aattaaagag ggagaagatt	600
ccccagactg taagctact ttagttctag tgaagaatgg aggactgata aatggataca	660
taacattaat gggagcctca gaatatacta acacccgtt taaaacaatc aagttacaat	720
cgtatgtaaac ctgcatttg ataatactgg ccaaattatt acttacctat catcccttaa	780
aagtaacctg aactttaag acaaccaaaa catggctact ggaaccataa ccagtgc当地	840
aggcttcatg cccagcacca ccgcctatcc atttataaca tacgccactg agaccctaaa	900
tgaagattac atttatggag agtgttacta caaatctacc aatggaaactc tctttccact	960
aaaagttact gtcacactaa acagacgtat gttagttct ggaatggcct atgctatgat	1020
ttttcatggt ctctaaatgc agaggaagcc ccggaaacta ccgaagtcac tctcattacc	1068
tcccccttct tttttctta tatcagagaa gatgactgaa tgcattag	

**<210> 33**  
**<211> 1062**  
**<212> DNA**  
**<213> Adenovirus 16**

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agcccagatg gagttctaac tcttaatgt gttaatccac tcactaccgc cagcggaccc	240
ctccaactta aagttggaag cagtcttaca gtagatacta tcgatgggtc tttggaggaa	300

tctggcttgc aaacaaagga tgataaactt tgtttatcgc tgggagatgg gttggtaaca 360  
 aaggatgata aactatgtt atcgctggga gatgggttaa taacaaaaaa tgatgtacta 420  
 tgtgccaaac taggacatgg ccttgtgtt gactcttcca atgctatcac catagaaaac 480  
 aacacccctgt ggacaggcgc aaaaccaagc gccaactgtg taattaaaga gggagaagat 540  
 tccccagact gtaagctcac tttagttcta gtgaagaatg gaggactgat aaatggatac 600  
 ataacattaa tgggagcctc agaatatact aacacccctgt taaaaacaa tcaagttaca 660  
 atcgatgtaa acctcgatt tgataatact gccaatttttacttacatccctt atcatccctt 720  
 aaaagtaacc tgaactttaa agacaaccaa aacatggcta ctggaaccat aaccagtgcc 780  
 aaaggcttca tgcccagcac caccgcctat ccatttataa catacgccac tgagacccta 840  
 aatgaagatt acatttatgg agagtgttac tacaaatcta ccaatggAAC tctctttcca 900  
 ctaaaagtta ctgtcacact aaacagacgt atgttagctt ctggaatggc ctatgctatg 960  
 aatttttcat ggtctctaaa tgcagaggaa gccccggaaa ctaccgaagt cactctcatt 1020  
 acctccccct tcttttttc ttatatcaga gaagatgact ga 1062

<210> 34

<211> 353

<212> PRT

<213> Artificial sequence

<220>  
<223> Chimeric Ad5/Fib16 protein

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Met Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro  
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 Tyr Glu Asp Glu Ser Ser Gln His Pro Phe Ile Asn Pro Gly Phe

Tyr Glu Asp Glu Ser Ser Gln His Pro Phe Ile Asn Pro Gly Phe  
 20 25 30

Ile Ser Ser Asn Gly Phe Ala Gln Ser Pro Asp Gly Val Leu Thr Leu  
 35 40 45

Lys Cys Val Asn Pro Leu Thr Thr Ala Ser Gly Pro Leu Gln Leu Lys  
 50 55 60

Val Gly Ser Ser Leu Thr Val Asp Thr Ile Asp Gly Ser Leu Glu Glu  
 65 70 75 80

Asn Ile Thr Ala Ala Pro Leu Thr Lys Thr Asn His Ser Ile Gly

85

90

95

Leu Leu Ile Gly Ser Gly Leu Gln Thr Lys Asp Asp Lys Leu Cys Leu  
100 105 110

Ser Leu Glu Asp Gly Leu Val Thr Lys Asp Asp Lys Leu Cys Leu Ser  
115 120 125

Leu Gly Asp Gly Leu Ile Thr Lys Asn Asp Val Leu Cys Ala Lys Leu  
130 135 140

Gly His Gly Leu Val Phe Asp Ser Ser Asn Ala Ile Thr Ile Glu Asn  
145 150 155 160

Asn Thr Leu Trp Thr Gly Ala Lys Pro Ser Ala Asn Cys Val Ile Lys  
165 170 175

Glu Gly Glu Asp Ser Pro Asp Cys Lys Leu Thr Leu Val Leu Val Lys  
180 185 190

Asn Gly Gly Leu Ile Asn Gly Tyr Ile Thr Leu Met Gly Ala Ser Glu  
195 200 205

Tyr Thr Asn Thr Leu Phe Lys Asn Asn Gln Val Thr Ile Asp Val Asn  
210 215 220

Leu Ala Phe Asp Asn Thr Gly Gln Ile Ile Thr Tyr Leu Ser Ser Leu  
225 230 235 240

Lys Ser Asn Leu Asn Phe Lys Asp Asn Gln Asn Met Ala Thr Gly Thr  
245 250 255

Ile Thr Ser Ala Lys Gly Phe Met Pro Ser Thr Thr Ala Tyr Pro Phe  
260 265 270

Ile Thr Tyr Ala Thr Glu Thr Leu Asn Glu Asp Tyr Ile Tyr Gly Glu  
275 280 285

Cys Tyr Tyr Lys Ser Thr Asn Gly Thr Leu Phe Pro Leu Lys Val Thr  
290 295 300

Val Thr Leu Asn Arg Arg Met Leu Ala Ser Gly Met Ala Tyr Ala Met  
305 310 315 320

Asn Phe Ser Trp Ser Leu Asn Ala Glu Glu Ala Pro Glu Thr Thr Glu  
325 330 335

Val Thr Leu Ile Thr Ser Pro Phe Phe Ser Tyr Ile Arg Glu Asp  
340 345 350

Asp

<210> 35  
<211> 353  
<212> PRT  
<213> Adenovirus Ad16

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Tyr Glu Asp Glu Ser Ser Gln His Pro Phe Ile Asn Pro Gly Phe

20 25 30  
Ile Ser Ser Asn Gly Phe Ala Gln Ser Pro Asp Gly Val Leu Thr Leu  
35 40 45

Lys Cys Val Asn Pro Leu Thr Thr Ala Ser Gly Pro Leu Gln Leu Lys  
50 55 60

65 70 75 80  
Val Gly Ser Ser Leu Thr Val Asp Thr Ile Asp Gly Ser Leu Glu  
Lys Cys Ser Ser Leu Thr Val Asp Thr Ile Asp Gly Ser Leu Glu

85 90 95  
Asn Ile Thr Ala Ala Ala Pro Leu Thr Lys Thr Asn His Ser Ile Gly

100 105 110  
Leu Leu Ile Gly Ser Gly Leu Gln Thr Lys Asp Asp Lys Leu Cys Leu

115 120 125  
Ser Leu Gly Asp Gly Leu Val Thr Lys Asp Asp Lys Leu Cys Leu Ser

130 135 140  
Leu Gly Asp Gly Leu Ile Thr Lys Asn Asp Val Leu Cys Ala Lys Leu

145 150 155 160  
Gly His Gly Leu Val Phe Asp Ser Ser Asn Ala Ile Thr Ile Glu Asn

Asn Thr Leu Trp Thr Gly Ala Lys Pro Ser Ala Asn Cys Val Ile Lys  
165 170 175

Glu Gly Glu Asp Ser Pro Asp Cys Lys Leu Thr Leu Val Leu Val Lys  
180 185 190

Asn Gly Gly Leu Ile Asn Gly Tyr Ile Thr Leu Met Gly Ala Ser Glu  
195 200 205

Tyr Thr Asn Thr Leu Phe Lys Asn Asn Gln Val Thr Ile Asp Val Asn  
210 215 220

Leu Ala Phe Asp Asn Thr Gly Gln Ile Ile Thr Tyr Leu Ser Ser Leu  
225 230 235 240

Lys Ser Asn Leu Asn Phe Lys Asp Asn Gln Asn Met Ala Thr Gly Thr  
245 250 255

Ile Thr Ser Ala Lys Gly Phe Met Pro Ser Thr Thr Ala Tyr Pro Phe  
260 265 270

Ile Thr Tyr Ala Thr Glu Thr Leu Asn Glu Asp Tyr Ile Tyr Gly Glu  
275 280 285

Cys Tyr Tyr Lys Ser Thr Asn Gly Thr Leu Phe Pro Leu Lys Val Thr  
290 295 300

Val Thr Leu Asn Arg Arg Met Leu Ala Ser Gly Met Ala Tyr Ala Met  
305 310 315 320

Asn Phe Ser Trp Ser Leu Asn Ala Glu Glu Ala Pro Glu Thr Thr Glu  
325 330 335

Val Thr Leu Ile Thr Ser Pro Phe Phe Ser Tyr Ile Arg Glu Asp  
340 345 350

Asp

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<211> 42

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<220>

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42

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<220>  
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<400> 37 19  
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180  
agcccgatg gagttctaac tcttaaatgt gttaatccac tcactaccgc cagcggaccc  
240  
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300  
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360  
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420  
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720  
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780  
aagtaacctg aactttaaag acaaccaaaa catggctact ggaaccataa ccagtgc当地  
840  
aggcttcattg cccagcacca ccgcctatcc atttataaca tacgccactg agaccctaaa  
900  
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960  
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